



# The Pioneer Grant Program

The 2016 Pioneer Grant Program aims to reduce nutrient and/or sediment contaminant loads to the Maryland portion of the Chesapeake Bay and Maryland Coastal Bays from any nonpoint source: agriculture, urban or suburban stormwater, air, and septic by seeking proposals that focus on new techniques, information, or programs that increase the rate at which load reductions can occur.



## City of Baltimore

### **Watershed 263 BMP Theme Park**

*2005-2009*

**Project Track:** New technology

**Research Question:** Will stormwater retrofit installations be effective in an ultra-urban area like Baltimore City?

**Research Results:** Stormwater retrofit installations were completed in 6 locations and have been integrated with the streetscape and existing land used. These BMPs consist of surface filtration practices and impervious pavement removal, which provide low-maintenance methods of pollutant load reduction while decreasing the amount of stormwater runoff.

**Notable Information:** Prior to this project all of the stormwater in this area entered 43 miles of stormdrain systems before it was dumped in the Patapsco River.

## PROJECT PARTNERS



CENTER FOR  
**WATERSHED  
PROTECTION**



EA Engineering, Science,  
and Technology, Inc.

# The Pioneer Grant Program

## Final Report Narrative

City of Baltimore

### **Watershed 263 BMP Theme Park**

*2005-2009*

#### **Summary of Project**

Watershed 263 is a nine hundred thirty (930) acre stormdrain drainage area located in the west and southwest portion of Baltimore City. In Watershed 263, stormwater runoff travels through a forty three (43) mile stormdrain system before it empties into the mouth of the Gwynns Falls, in the Middle Branch of the Patapsco River before entering the Baltimore harbor. The neighborhoods located in Watershed 263 include Sandtown-Winchester, Harlem Park, Franklin Square, Union Square, New Southwest Mount Clare, Boyd-Booth, Carrollton Ridge, Poppleton, Hollins market, Washington Village and the Carroll-Camden Area.

The Watershed 263 BMP Theme Park is a pilot project that brings the latest thinking in stormwater management to the East Coast and to the ultra-urban areas of Baltimore. Stormwater retrofit installations have been completed in six locations and have been integrated with the streetscape and existing land uses. These six locations were selected out of 150 by the Center for Watershed Protection (CWP).

The stormwater BMPs (best management practices) consist of surface filtration practices and imperious pavement removal. These BMPs will provide low-maintenance methods of pollutant load reduction while decreasing the amount of stormwater runoff and adding beautification/aesthetic value to the surroundings. Landscape designs were based on feedback received from various members of the Franklin Square Community Association.

This project is a cooperative effort between the City of Baltimore, the Center for Watershed Protection (CWP), the Parks and people Foundation, the Bon Secours of Maryland Foundation, and EA Engineering, Science and Technology Inc. Concept designs were completed by CWP in April 2007, with final designs completed by EA Engineering, Science and Technology and Greenhorne & O'Mara in November 2008. Construction by EQR Inc began in late March 2009 and was completed in September 2009.

The project will include a Watershed 263 BMP Theme Park Virtual Tour website, which will be completed in winter 2010. The website will serve as a reference tool for other watershed associations and municipalities through the United States. This project was also featured as a presentation by CWP during the 2009 River Rally in Baltimore, May 29-31.

#### **Project Evaluation**

As shown by the submitted pictures, the Watershed 263 BMPs have added aesthetic features, as well as water quality benefits to an ultra-urban setting located in Baltimore City. The approach consists of diverting runoff into the BMP's where it will infiltrate, filter, store, evaporate, detain and treat first flush storm flows before it enters a stormdrain system and eventually into the local streams. This Low Impact Development (LID) technology has been looked on favorably by many states, local governments, and environmental agencies as a way of treating stormwater runoff.

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Lessons learned: Be ready for any changes in the field during construction. We had to be very cognizant of the underground utilities. We had to relocate light poles that were not in the original design. Coordination with local utility companies are advised well before construction start time.

Soil types were also crucial. Some of our BMPs were placed in sandy soils which could not sufficiently hold the BMPs. Make sure soil types are amenable for such projects of the BMPs will have to be reinforced to accommodate certain loose type soils.

### **Transferability and Sustainability**

The Watershed 263 BMP project is a new LID practice in treating stormwater runoff in an ultra-urban area like Baltimore and in the Chesapeake region. These practices will be highlighted and displayed in an upcoming web-based virtual tour that will be targeted to the general public as well as practitioners in the field. The history of the project will be presented along with detailed graphics describing all aspects of the BMP including assessment, construction, costs, and future maintenance.

The City of Baltimore is currently in the process of designing and installing five more BMP designs in Watershed 263. Construction is anticipated in 2011. This new project will also be documented on the web-based virtual tour.

### **Monitoring and Maintenance**

The City of Baltimore's Surface Water Management Division is currently devising techniques to commence wet-weather monitoring at the BMP locations to gauge their effectiveness. Maintenance of the BMPs will be provided by the City of Baltimore and the Parks and People Foundation who recently was awarded a "green jobs" grant.

### **Community Involvement and Outreach Activities**

The City of Baltimore has teamed with the Parks and People Foundation for community outreach and to gather quality of life indicators in Watershed 263. Parks and People will be responsible for educating the community on the importance and stewardship of these projects.

### **Partnerships**

The Center for Watershed Protection (CWP): Developed the conceptual designs for the Watershed 263 BMP project. They are producing the Watershed 263 BMP Theme Park Virtual Tour.

The Parks and People Foundation (PPF): They are responsible for public outreach in Watershed 263 to educate the community on the importance of such projects. The PFF will also provide maintenance and landscaping at the BMP sites.

### **Accounting of Expenditures**

CBT Funds: \$100,000

Motor Vehicle Revenue Funds: \$217,103

**Total Funds: \$317,103**